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PSNS & IMF Project ENVVEST Is Helping Improve Environmental Quality In Sinclair And Dyes Inlets, WA

The Puget Sound Naval Shipyard & Intermediate Maintenance Facility (PSNS & IMF), the Environmental Protection Agency, the Washington State Department of Ecology, and other technical stakeholders are cooperating in an ENVironmental inVESTment (ENVVEST) project to develop and demonstrate alternative strategies for protecting and improving the ecological integrity of Sinclair and Dyes Inlets and their surrounding watershed in Puget Sound, Washington.

Project ENVVEST is developing and demonstrating alternative, long-term, cost-effective strategies for protecting and improving the health of Sinclair and Dyes Inlets and the adjacent watershed. Project ENVVEST provides a process to work with local stakeholders to evaluate the conditions in Dyes and Sinclair Inlets, identify the appropriate

USS Abraham Lincoln (CVN 72) docking at the Shipyard in Sinclair Inlet, WA. (Photo by MESO-NW)

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actions to improve environmental quality, and then propose ways to make it happen. Project ENVVEST will allow pollution prevention and cleanup strategies to be focused on the pollutants that have the highest potential to adversely affect the health of the watershed (Johnston *et al.* 2000). A key element is the development of a unified monitoring program and electronic database for Sinclair and Dyes Inlets. The Marine Environmental Support Office of the Space and Naval Warfare Systems Center San Diego (SSC SD) has maintained a Northwest Detachment (MESO-NW) in Bremerton, WA, to provided technical support and coordination for the execution of Project ENVVEST.

Sinclair and Dyes Inlets were listed on the 1998 303(d) list of impaired waters because of fecal coliform (FC) contamination in the marine waters and metals and organic contaminants in bottom sediments and fish tissues. Cooperative studies, initiated under Project ENVVEST, are addressing contamination issues and developing water cleanup plans for the watershed. Significant progress has been made on developing a Total Maximum Daily Load (TMDL) study of FC for Sinclair and Dyes Inlets. As specified in the TMDL Study Plan, more than 1200 fecal coliform (FC) samples were collected from Sinclair and Dyes Inlets and surrounding watershed during the winter of 2002-2003 (see map of station locations).

These data were combined with historical data collected by the Kitsap County Health District (KCHD 2002, 2003), the Washington State Department of Health (WDOH, Determan 2001, 2003), and Kitsap County Surface and Storm Water Management (SSWM 2003) to characterize FC sources, estimate FC loading into the Inlets, evaluate the impact on the quality of marine waters, and support the development of a water clean up plan for the Sinclair/Dyes Inlet watershed (May *et al.* 2003). Currently, these data and other information are being used to verify the model and define modeling scenarios that will be simulated to support the TMDL for FC within the Inlets (Johnston *et al.* 2004).

Models have been developed for simulating runoff and loading from the watershed and fate and transport of fecal coliform (FC) bacteria in Sinclair and Dyes Inlets (Johnston *et al.* 2003). The ability to simulate FC fate and transport in the Inlets assisted in the reopening of 1500 acres of shellfish beds in Dyes Inlet (WDOH 2003a). The reopening came about because the City of Bremerton has nearly eliminated combined sewage overflows (CSOs); and the model, developed by Project ENVVEST, shows that any FC released from CSO events mostly dissipates before reaching the shellfishing areas subject to the new classification (WDOH 2003b).

A process to address heavy metal contamination listed on the State of Washington's 1998 Clean Water Act Section 303(d) list of impaired waterbodies in Sinclair and Dyes Inlets was developed by The Project ENVVEST working group. A sampling plan was developed to synoptically sample sediments (top 10 cm) from stations in Dyes Inlet, Port Orchard Passage, and Rich Passage. In conjunction with clean-up monitoring following remediation and dredging completed for Operable Unit B Marine, sediment samples adjacent to the Shipyard and the rest of Sinclair Inlet were also obtained. This study will provide data necessary to determine whether Sinclair and Dyes Inlets should continue to be listed for heavy metals on the State of Washington's 303(d) list.

A study of the mass-balance and historical loadings of contaminants in Sinclair and Dyes Inlets is also being conducted. Sediment cores and traps were collected from depositional areas of the Inlets and surface sediment grabs were collected from fluvial deposits associated with major drainage areas into the

Inlets. The historical trends from the cores indicate that contamination was at a maximum in the mid-1900s, and decreased significantly by the late 1990s. The thickness of the contaminated sediment is in the range of 15 to 45 cm (Crecelius *et al.* 2003).

Project ENVVEST is partnering with the Washington Department of Fish and Wildlife to evaluate tissue residues of metals and PCBs in biological samples collected from Sinclair Inlet. As part of the Puget Sound Ambient Monitoring Program – a multi-agency effort to monitor the health of Puget Sound – otter trawl surveys were conducted in April-May 2003 to assess the status and trends of chemical contamination in fish and macro-invertebrates of Puget Sound.

Fish and invertebrates collected from Sinclair Inlet during the May 2003 PSMAP otter trawl. (Photo by Battelle Marine Sciences Laboratory)

Representative demersal fish and invertebrate species were collected from Sinclair Inlet and reference locations (Straight of Georgia, Port Gardner, and Nisqually Reach) for chemical analysis. Eight species of fish and invertebrates from Sinclair Inlet and reference areas were analyzed for metals, polychlorinated biphenyls (PCBs), and pesticides. The data will be used to evaluate contamination accumulation in the food chain of Sinclair and Dyes Inlets.

By basing the assessment at the watershed scale, Project ENVVEST technical studies are providing data to address key issues identified by the technical working groups, improving the understanding of how the ecosystem functions, and increasing the ability to solve environmental problems. The technical working groups are fostering partnering among stakeholders and establishing the technical and scientific basis to better protect and improve the health of the watershed.

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FWS Proposes Rule Authorizing Incidental Takes Of Migratory Birds By DOD

On June 2, 2004, the Fish and Wildlife Service proposed a rule to authorize the Department of Defense to take migratory birds associated with military readiness activities under the Migratory Bird Treaty Act (MBTA). The MBTA prohibits the taking, killing, or possessing of migratory birds unless permitted by regulations promulgated by the Secretary of the Interior.

While some courts have held that the MBTA does not apply to Federal agencies, in July 2000, the United States Court of Appeals for the District of Columbia Circuit ruled that the prohibitions of the MBTA do apply to Federal agencies, and that a Federal agency's taking and killing of migratory birds without a permit violated the MBTA. On March 13, 2002, the United States District Court for the District of Columbia ruled that military training exercises of the Department of the Navy that incidentally take migratory birds without a permit violate the MBTA.

On December 2, 2002, the President signed the 2003 National Defense Authorization Act. Section 315 of the Authorization Act provides that the Secretary of the Interior shall prescribe regulations to exempt the Armed Forces for the incidental taking of migratory birds during military readiness activities authorized by the Secretary of Defense or the Secretary of the military department concerned. The Defense Authorization Act further requires the promulgation of regulations with the concurrence of the Secretary of Defense.

The DOD will consult with the FWS to identify measures to minimize and mitigate adverse impacts of authorized military readiness activities on migratory birds and to identify techniques and protocols to monitor impacts of such activities. The proposed rule describes the inventory, avoidance, habitat enhancement, partnerships, and monitoring efforts currently undertaken by the DOD. Additional conservation measures, designed to minimize and mitigate adverse impacts of authorized military readiness activities on affected migratory bird species, with emphasis on species of concern, will be developed in joint coordination with the FWS when specific military readiness activities suggest the need for additional measures.

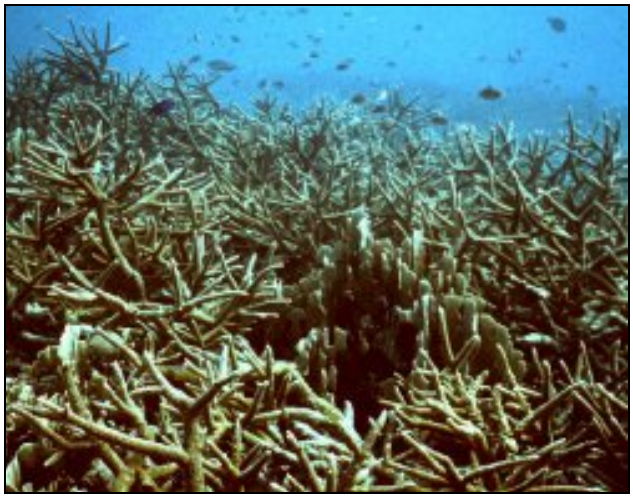
The proposed rule and related documents can be downloaded at http://migratorybirds.fws.gov/.

For further information contact: Brian Millsap, Chief, Division of Migratory Bird Management, U.S. Fish and Wildlife Service; telephone: (703) 358-1714. Comments on the proposed rule will be accepted until August 2, 2004. Comments may be sent to the Division of Migratory Bird Management, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, Room 4107, Arlington, Virginia 22203-1610; facsimile: (703) 358-2217; e-mail: DODMBTARULE@fws.gov.

Federal Register, Volume 69, Number 106, Wednesday, June 2, 2004, pp 31074-31085 (85.3 KB text file or 97.2 KB Adobe™ Acrobat™ file).

NMFS Releases Species Of Concern List; Revision Of Candidate Species List

On April 15, 2004, the National Marine Fisheries Service announced the release of a Species of Concern list, a description of the factors that it will consider when identifying Species of Concern, and revision of the Endangered Species Act Candidate Species list. The NMFS transferred 25 Candidate Species to the Species of Concern list and identified 20 additional species as Species of Concern. Twelve species were removed from the Candidate Species list.



A thicket of Staghorn coral, *Acropora cervicornis.* (NOAA photograph)

Two Species of Concern were also considered to be Candidate Species because they are undergoing status reviews in response to an ESA petition to list them. The ESA defines species as including "any subspecies of fish or wildlife or plants, and any distinct population segment (DPS) of any species of vertebrate fish or wildlife which interbreeds when mature."

Under the ESA, a Candidate Species is one that is being considered for listing as an endangered or a threatened species. Most former Candidate Species had uncertain biological status and threats, but were not actively being considered for listing under the ESA. Some former Candidate Species had undergone an ESA biological status review determining that listing was "not warranted" (see *Marine Environmental Update*, Vol. FY03, No. 1), but significant concerns or uncertainties remained regarding their extinction risk and/or threats. These species are now considered Species of Concern.

Only those species that are being actively considered for ESA listing are also Candidate Species. Neither status carries any procedural or substantive protections under the ESA. In general, the NMFS will determine whether a population satisfies the criteria for a DPS after conducting an ESA status review. The NMFS may conduct status reviews on species that are not the subject of a petition. As with a petitioned species, initiation of a status review does not mean that an ESA listing is imminent. Even after a status review has been conducted, it is possible that the available information will be insufficient to make a determination on the status of the species. In such cases, the NMFS will continue gathering new information as it becomes available, and the species may become or remain a species of concern.

The 25 Candidate Species moved to the Species of Concern list are:

- Cook Inlet Beluga Whale (*Delphinapterus leucas*)
- Barndoor skate (*Raja laevis*)
- Georgia Basin Pacific Hake (*Merluccius productus*)
- Bocaccio (*Sebastes paucispinis*)
- Large sawfish (*Pristis pristis*)
- Dusky shark (*Carcharhinus obscurus*)
- Sand tiger shark (*Odontapsis taurus*)
- Night shark (*Carcharhinus signatus*)
- Alabama shad (*Alosa alabamae*)
- Atlantic salmon (*Salmo salar*)
- Mangrove rivulus (*Rivulus marmoratus*)
- Lower Columbia River coho salmon ESU (*Oncorhynchus kisutch*)
- Opossum pipefish (*Microphis brachyurus lineatus*)
- Goliath grouper (Jewfish) (*Epinephelus itajara*)
- Nassau grouper (*Epinephelus striatus*)
- Black abalone (*Haliotis cracherodii*)
- Elkhorn coral (*Acropora palmate*)
- Atlantic sturgeon (*Acipenser oxyrhynchus oxyrhynchus*)
- Saltmarsh topminnow (*Fundulus jenkinsi*)
- Puget Sound/Straight of Georgia coho salmon ESU (*Oncorhynchus kisutch*)
- Oregon Coast steelhead ESU (*Oncorhynchus mykiss*)
- Key silverside (*Menidia conchorum*)
- Speckled hind (*Epinephelus drummondhayi*)
- Warsaw grouper (*Epinephelus nigritus*)
- Staghorn coral (*Acropora cervicornis*)

The 20 Species of Concern added to the list are:

- Green sturgeon – Northern DPS (*Acipenser medirostris*)
- Green sturgeon – Southern DPS (*Acipenser medirostris*)
- White marlin (*Tetrapturus albidus)*
- Chinook salmon (*Oncorhynchus tshawytscha*)
- Thorny skate *(Raja radiata*)
- Rainbow smelt (*Osmerus mordax)*
- Cusk (*Brosme brosme*)
- Striped croaker (*Bairdiella sanctaeluciae)*
- Humphead wrasse (*Cheilinus undulatus)*
- Bumphead parrotfish (*Bolbometopon muricatum)*
- Atlantic wolfish *(Anarhichus lupus*)
- Cowcod (*Sebastes levis*)
- Atlantic halibut (*Hippoglossus hippoglossus*)
- Inarticulate brachiopod (*Lingula reevii*)
- Pink abalone (*Haliotis fulgens)*
- Green abalone (*Haliotis corrugate*)
- Pinto abalone (*Haliotis kamtschatkana*)
- Hawaiian coral (*Montipora dilitata)*
- Ivory bush coral (*Oculina varicose)*
- Oregon Coast coho salmon (*Oncorhynchus kisutch*)

The 12 species removed from the Candidate Species list are:

- Gulf of Maine Harbor porpoise (*Phocoena phocoena*)
- Puget Sound Pacific Herring (*Clupea pallasi*)
- Klamath Mountains Province ESU of steelhead (*Oncorhynchus mykiss*)
- Puget Sound Pacific Cod (*Gadus macrocephalus*)
- Puget sound walleye Pollock (*Theragra chalcogramma*)
- Puget Sound brown rockfish *(Sebastes auriculatus*)
- Puget Sound copper rockfish (*Sebastes caurinus*)
- Puget Sound quillback rockfish (*Sebastes maliger*)
- Smalltooth sawfish (*Pristis pectinata)*
- Northern California steelhead (*Oncorhynchus mykiss*)
- White abalone (*Haliotis sorenseni*)
- Oregon Coastal ESU of cutthroat trout (*Oncorhynchus clarki*)

Factors for Identifying Species of Concern

In previous revisions of its Candidate Species list, the NMFS identified Candidate Species by considering their biological status, determined by both demography and genetic composition of the species. Demographic concerns would occur when there is a significant decline in abundance or range from historical levels, and genetic concerns included outbreeding and inbreeding depression resulting from poor hatchery practices or substantially reduced numbers of natural individuals.

The Nassau grouper, *Epinephelus striatus.* (NOAA photograph)

The NMFS will consider these demographic and genetic diversity concerns, as further elaborated by the following factors, in identifying species of concern: abundance and productivity; distribution; and life-history characteristics. These factors will be considered with regard to existing threats. The NMFS will review the best available information for the relevant factors and threats on a case-by-case basis and use its best professional judgment in deciding whether a species or population should be considered a species of concern. The NMFS may conduct Endangered Species Act status reviews on each species of concern as agency resources permit.

These actions are effective April 15, 2004. Further information on these designations can be found at: http://www.nmfs.noaa.gov/pr/species/concern/.

Federal Register, Volume 69, Number 73, Thursday, April 15, 2004, pp. 19975-19979 (33.6 KB text file or 72.9 KB Adobe™ Acrobat™ file).

Proposed NMFS Listing Determinations For 27 West Coast Salmonid ESUs

On June 14, 2004, the National Marine Fisheries Service announced the completion of comprehensive status reviews for 26 West Coast salmon (chum, *Oncorhynchus keta*; coho, *O. kisutch*, *O. nerka*; chinook, *O. tshawytscha*; pink, *O. gorbuscha*) and *O. mykiss* (inclusive of anadromous steelhead and resident rainbow trout) Evolutionarily Significant Units (ESUs) previously listed as threatened and endangered species under the Endangered Species Act, as well as one ESU that was designated as a candidate species.

Based on these reviews, the NMFS issued a proposed rule to list four ESUs as endangered and 23 ESUs as threatened. Collectively, these 27 ESUs include 162 artificial propagation programs. The NMFS also proposes amending existing protective regulations, promulgated under Section 4(d) of the ESA, for threatened ESUs.

Comments on the proposed rule must be received no later than 5 p.m. PT on September 13, 2004. Dates and locations of public hearings in California, Oregon, Washington, and Idaho will be announced in a separate Federal Register notice. Comments should be submitted to Chief, Protected Resources Division, NMFS, 525 NE Oregon Street--Suite 500, Portland, OR 97232-2737. Comments on this proposed rule can be submitted by e-mail to: salmon.nwr@noaa.gov (include the document identifier: 040525161-4161-01 in the subject line). Comments may also be submitted via facsimile to (503) 230-5435, or via the Internet at: http://www.nmfs.noaa.gov/ibrm, or through the Federal e-Rulemaking portal at: http://www.regulations.gov/.

For further information on the proposed rule contact: Garth Griffin, NMFS, Northwest Region, telephone: (503) 231-2005; Craig Wingert, NMFS, Southwest Region, telephone: (562) 980-4021; or Marta Nammack, NMFS, Office of Protected Resources, telephone: (301) 713-1401.

Federal Register, Volume 69, Number 113, Monday, June 14, 2004, pp. 33101-33179 (617 KB text file or 443 KB Adobe™ Acrobat™ file).

FWS Publishes Updated List Of Candidates For Endangered Species Act Listing

On May 4, 2004, the Fish & Wildlife Service published a revised list of species of plants and animals that may warrant protection under the Endangered Species Act, including 26 new Candidate Species added since the Candidate Notice of Review was last published in 2002. One species was removed because currently available information does not support a listing proposal. Four species were removed because the proposal to list them was withdrawn. Fourteen proposed species became listed as endangered.

Copies of the candidate forms that contain information and references regarding the range, status, and habitat needs of and listing priority assignment for a particular species are available for review at the

appropriate Regional Office listed in the notice or at the Division of Conservation and Classification, Arlington, Virginia, or at http://endangered.fws.gov/. For further information contact the Endangered Species Coordinator(s) in the appropriate Regional Office(s) or Chris Nolin, Chief, Division of Conservation and Classification, telephone: (703) 358-2171.

The FWS is accepting comments on the Candidate Notice of Review at any time. Comments regarding a particular species may be submitted to the Regional Director of the Region identified as having the lead responsibility for that species. Comments of a more general nature may be submitted to the Chief, Division of Conservation and Classification, U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, Room 420, Arlington, VA 22203; telephone: (703) 358-2171.

Federal Register, Volume 69, Number 86, Tuesday, May 4, 2004, pp. 24875-24904 (230 KB text file or 189 KB Adobe™ Acrobat™ file).

NMFS Designates Group Of Transient Killer Whales As Depleted Stock

On Thursday, June 03, 2004, the National Marine Fisheries Service designated the AT1 group of transient killer whales in Alaska as a depleted stock under the Marine Mammal Protection Act (see *Marine Environmental Update*, Vol. FY04, No. 1). The stock includes all killer whales belonging to the AT1 group of transient killer whales occurring primarily in waters of Prince William Sound, Resurrection Bay, and the Kenai Fjords region of Alaska. No additional regulations are associated with this designation.

Federal Register, Volume 69, Number 107, Thursday, June 3, 2004, pp. 31321-31324 (20.8 KB text file or 57.4 KB Adobe™ Acrobat™ file).

EPA Releases Task Force Examination Of Risk Assessment Principles And Practices

On March 25, 2004, the Environmental Protection Agency announced the release of the EPA Risk Assessment Task Force staff paper: *An Examination of EPA Risk Assessment Principles and Practices*; which represents an effort to examine how risk assessments are conducted at the EPA. The document presents the perspectives of EPA risk assessors on how they understand risk assessment are conducted at the EPA. It presents staff recommendations for the EPA and interested stakeholders to consider as to how the EPA can move forward with strengthening and, where appropriate, improving its risk assessment practices. The staff paper does not represent official EPA policy.

The Task Force was charged with taking a broader look across the EPA's risk assessment principles and practices, and with considering several issues as they relate to EPA risk assessment in general. Among the latter issues are questions such as:

a. Is science policy mixed into the risk assessment process or not?
b. Are EPA risk assessments sufficiently transparent in dealing with uncertainty and variability as well as identifying default assumptions when used in risk assessments?
c. When data are not available, are the utilized default assumptions applied in such a way that the resulting risk estimates are reasonable and not unrealistic overstatements of risk?
d. Are there characteristics of risk assessment that may result in risk underestimation that the EPA should be addressing?

The Task Force developed a set of recommendations based on its review. Some of the recommendations focus on increasing the certainty and confidence in EPA risk assessments, including development of more specific data relevant to a decision and ensuring that defaults that are invoked are themselves scientifically supported.

Other recommendations encourage greater transparency and clarity in EPA risk assessment practices and the risk management process, such as greater use of planning and scoping and close attention to existing guidance (*e.g.*, Risk Characterization Policy and Handbook). Some specific recommendations include greater use of probabilistic analyses where appropriate (and development of these techniques where the EPA has not traditionally used them), greater cooperation with EPA partners in risk assessment (*e.g.*, States, foreign governments, affected stakeholders), and constant vigilance to peer review efforts.

Further information is available at http://www.epa.gov/osa/ratf.htm.

Federal Register, Volume 69, Number 58, Thursday, March 25, 2004, pp. 15326-15238 (15.7 KB text file or 56.9 KB Adobe™ Acrobat™ file).

CA State Water Resources Control Board Releases NPS Encyclopedia

In April 2004, the California State Water Resources Control Board announced the availability of the *California Nonpoint Source Encyclopedia*, a condensed quick-reference guide that provides an entry point to information on nonpoint source management practices in California. It includes a brief discussion of the main elements and intent of the 61 nonpoint source management measures for each of the six nonpoint source categories (agriculture; forestry; urban areas; marinas and recreational boating; hydro-modification; and wetlands, riparian areas, and vegetated treatment systems).

The NPS Encyclopedia also includes descriptions of management practices and how they can be used to meet each management measure, as well as their applicability to various situations in California and their cost-effectiveness in different climatic and land use settings. The information in the NPS Encyclopedia is

intended to assist State agencies, Regional Water Quality Control Boards, local agencies, and nonpoint source practitioners in identifying and implementing practices to protect high quality waters and restore impaired waters.

The goal of this guidance document is to provide the most relevant information to State agencies, regional boards, local agencies, and nonpoint source practitioners to assist them in identifying and implementing practices to protect high-quality waters and restore impaired waters. The guidance is organized around the six nonpoint source categories identified in the Plan for California's Nonpoint Source Pollution Control Program of 2000: agriculture, forestry, urban areas, marinas and recreational boating, hydro-modification, and wetlands/riparian areas/vegetated treatment systems.

The guidance supports the plan's goal of implementing the 61 nonpoint source management measures by 2013. It also supports the implementation of nonpoint source total maximum daily loads (TMDLs), as well as the development of TMDL implementation plans and watershed plans. A companion set of tools will also be available through the Internet to assist users in identifying potential management practices and estimating the effectiveness of those practices in managing pollution.

The document is available at: http://carmel.tetratech-ffx.com/canps/ency.html (NOTE: The CA NPS Encyclopedia is temporarily unavailable because it is undergoing additional technical and legal review. It is expected to be posted again on June 30, 2004).

TetraTech, Inc. The California Nonpoint Source Encyclopedia*. California State Water Resource Control Board. April 2, 2004.*

Web-Based Compendium of Environmental Testing Laboratories Developed By EPA

Following September 11, 2001, the Environmental Protection Agency recognized the need for readily accessible information on the capabilities and capacities of environmental laboratories to respond to air, soil, and water contamination. In response, EPA developed the Compendium of Environmental Testing Laboratories, a web-based tool designed to collect, disseminate, and maintain information on laboratories that analyze chemical, biological and radiochemical analytes most likely to be associated with a contamination incident.

The Compendium was developed as a tool to quickly identify laboratories with the capabilities to support incident-specific response and recovery. In non-emergency situations, the Compendium serves as a resource for EPA offices seeking analytical services. The EPA anticipates the Compendium will contain information on approximately 900 laboratories by the end of 2004. As additional laboratories participate in this effort, the Compendium will serve as an tool to water utilities, emergency responders, and Federal, State, and local agencies in responding to contamination threats, terrorist attacks, or natural disasters.

The Compendium is intended for emergency response and laboratory personnel, and, at this time, access is limited to State and Federal users and water utilities. The Compendium is available at: https://cfint.rtpnc.epa.gov/cetl/ (registration required).

EPA WaterNews April 20, 2004.

New Version of AQUATOX Available

On April 13, 2004, the Environmental Protection Agency's Office of Water announced the release of an enhanced version of AQUATOX, a user-friendly simulation model for aquatic ecosystems. It is designed help users evaluate and illustrate the causal links between the chemical and physical environment and the living systems that inhabit the water. AQUATOX can predict the fate of pollutants and their effects on the ecosystem. While the model has been available for several years, the enhanced Release 2 allows a more complete and realistic representation of the ecosystem. AQUATOX is a tool for ecologists, biologists, water quality modelers, and anyone involved in performing ecological risk assessments.

AQUATOX Release 2, and accompanying documentation, is available for download at http://www.epa.gov/waterscience/models/aquatox/. CD-ROMs and hard copies of the documentation will also be available from the National Service Center for Environmental Publications (NSCEP), telephone: (800) 490-9198; or from the Water Resources Center, telephone: (202) 566-1729.

EPA WaterNews, April 13, 2004.

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The Marine Environmental Support Office may be reached at:

MARINE ENVIRON SUPPORT OFC
SPAWARSYSCEN 23621
53475 STROTHE ROAD
SAN DIEGO CA 92152-6326

Telephone: 619.553.5330/5331/5313
DSN 553.5330/5331/5313
Facsimile: 619.553.5404; DSN 553.5404

PLAD: SPAWARSYSCEN SAN DIEGO CA

E-mail: meso@spawar.navy.mil
WWW: http://meso.spawar.navy.mil/